

Work Order ID 115503

April-02-14 11:13:53 AM

115503

Page 1

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Tube Assembly
Start Date: 4/02/14 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 4/16/14 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: MLS Date: 14-04-02 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	I								

100

0.00

100

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Cut tube to finish length as per Dwg D3391

2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

3-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

4-Remove .030" from Fwd indexing Ridge as per Dwg D3391

5-Remove indexing ridge on Fwd. & Aft end of skidtube as per Dwg D3391

6-Deburr

7-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,
***DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG

8-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (10 holes) as per Dwg D3391

9-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

DO NOT OPEN 2 MOST FWD WEARPLATE HOLES

BE14-06-25

Work Order ID 115503

April-02-14 11:13:54 AM

115503

Page 2

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Tube Assembly
Start Date: 4/02/14 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 4/16/14 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	10-Open .375" holes to .438" ***do not open fwd saddle holes***			BE14-06-25					
	11-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)								
	12- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021 D3391-021 BATCH: <u>115500</u>								
	13- Using DT8217, locating from two previusly drilled holes, drill remaining wearplate holes into D3391-021.								
	14- Locating from two fwd wearplate holes in D3391-023 drill remaining 6 wearplte holes in D3391-021 using DT8937								
	15- Open 10 wearplate holes in D3391-021 to 0.297" dia.								
	16- insert D3391-021 into D3391-23								
	17- insert T-pins into first and third fwd saddle holes								
	18- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per								
	19- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499".								
	20-Deburr and blow out all chips from inside tube, scribe batch # in D3391-023 at aft end.								

Handwritten signature and date: 14-8-11

Work Order ID 115503

April-02-14 11:13:54 AM

115503

Page 3

Item ID: D3391-023

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Mid Tube Assembly

Start Date: 4/02/14

Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/16/14

Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Memo

0.00

Quality Control

DAS

24

9-89

DAE

38

9-89

120

Chemical Conversion Coat per QSI005 4.1

0.00

120

HandFinish

Memo

0.00

Hand Finishing

130

QC7-Inspect Chemical Conversion Coat

0.00

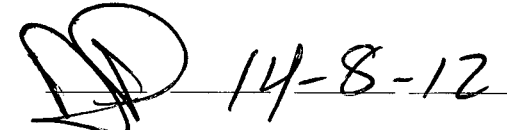
130

QC

Memo

0.00

Quality Control



Work Order ID 115503

115503

Page 4

April-02-14 11:13:54 AM

Item ID: D3391-023 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Mid Tube Assembly

Start Date: 4/02/14 Start Qty: 1.00 *1*

Required Date: 4/16/14 Req'd Qty: 1.00 *1*

Reference: Cust Item ID: Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Skidtubes	0.00							
140									
Skidtubes	Memo	0.00							
Skidtubes	1-Open float bag holes as per dwg 2-C'sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: 14-11-20 batch#: M129457 NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE								
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo	0.00							
Quality Control									

DD 14-8-12

DAS
18
9-89

1 0 14-08-13

Work Order ID 115503

April-02-14 11:13:54 AM

115503

Page 5

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Mid Tube Assembly
 Start Date: 4/02/14 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 4/16/14 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Weld crossbolt spacer as per dwg D3391 & QSI 004 <i>A/R M129285</i>								
	2-grind weld flush <i>DE140813</i>								
	<i>DD 14-8-18</i>								
170	QC10- Inspect visual per QSI004- ground welds	0.00							
170									
QC	Memo	0.00	DAS						
Quality Control			16	<i>14/08/19</i>					
			9-89						
180	QC5- Inspect part completeness to step on W/O	0.00							
180									
QC	Memo	0.00	DAS						
Quality Control			16	<i>14/08/19</i>					
			9-89						

Work Order ID 115503

115503

Page 6

April-02-14 11:13:54 AM

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Mid Tube Assembly
Start Date: 4/02/14 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 4/16/14 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
185	Pressure Wash per QSI005 4.3	0.00							
185									
HandFinish	Memo	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								
190	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
190									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <u>1:45</u> OVEN TEMPERATURE: <u>320°</u> FINISH TIME: <u>2:15</u>								
200	QC3- Inspect Part Finish	0.00							
200									
QC	Memo	0.00							
Quality Control									

33 34 35 36 37 38 39

DAS 15 8-09

Work Order ID 115503

April-02-14 11:13:54 AM

115503

Page 7

Item ID: D3391-023 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Mid Tube Assembly
 Start Date: 4/02/14 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 4/16/14 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00				1x	1	11	1104/12
230	HandFinish	0.00							
Hand Finishing	Memo								
	1- press fit D3591-1 spacers using DT9416 starting from 0.500" side								
	2-Install Inserts as per Dwg								
240	QC5- Inspect part completeness to step on W/O	0.00				1			DAS 38 9-89 149-16
240	QC	0.00							
Quality Control	Memo								
250	Identify as per dwg & Stock Location: <u>w6</u>	0.00				1x	1	11	1104/11
250	Packaging	0.00							
Packaging	Memo								

Work Order ID 115503

April-02-14 11:13:54 AM

115503

Page 8

Item ID: D3391-023 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Mid Tube Assembly
Start Date: 4/02/14 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 4/16/14 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

260

QC21- Final Inspection - Work Order Release

0.00

260

QC

Memo

0.00

Quality Control

14/9/17

MF 14-9-16

Picklist Print

April-02-14 11:13:57 AM

Page 1

Work Order ID: 115503

115503

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 4/02/14

Required Date: 4/16/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A05.10.20New Issue KJ/EC
 IPP B06.02.10ECN773 dwg rev.D EC
 IPP C 07.03.20 rev F dwg EC
 IPP D 07.03.28 re-format EC
 IPP E 07.10.31 ecn 1053P EC
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev:I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
 Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2500-1-100		Manufactured	No			100	Each	83.0000	1	1			
D2500-1-100									**				
Skidtube Extrusion													

Location	Loc Qty	Loc Code
HALL	83	
82373	22	
86065	61	

D3389-1		Manufactured	No			140	Each	8.0000	1	1			
D3389-1									**				
Web													

Location	Loc Qty	Loc Code
LG	8	
113057	8	
114969		

D3681-1		Manufactured	No			160	Each	234.0000	5	5			
D3681-1									**				
Spacer													

Location	Loc Qty	Loc Code
LG	168	
114884	168	
LG001	66	
109109	66	

Picklist Print

April-02-14 11:13:57 AM

Page 2

Work Order ID: 115503

115503

Parent Item: D3391-023

D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 4/02/14

Required Date: 4/16/14

Start Qty: 1.00

Required Qty: 1.00

D3591-1

Manufactured No

Each

88.0000

2

D3591-1

Bushing

ll 11/09/14

Location

Loc Qty

Loc Code

FG

10

92873

10

B115533

v2

FP001

78

100699

5

107918

36

109107

37

ALS4-1032-130

AELS4-1032-130 Purchased

No

230

Each

9,937.000

20

20

AI S4-1032-130

Rivnut

ll 11/09/14

Location

Loc Qty

Loc Code

FP001

9832

M128649

9832

v20

ST279

48

M128211

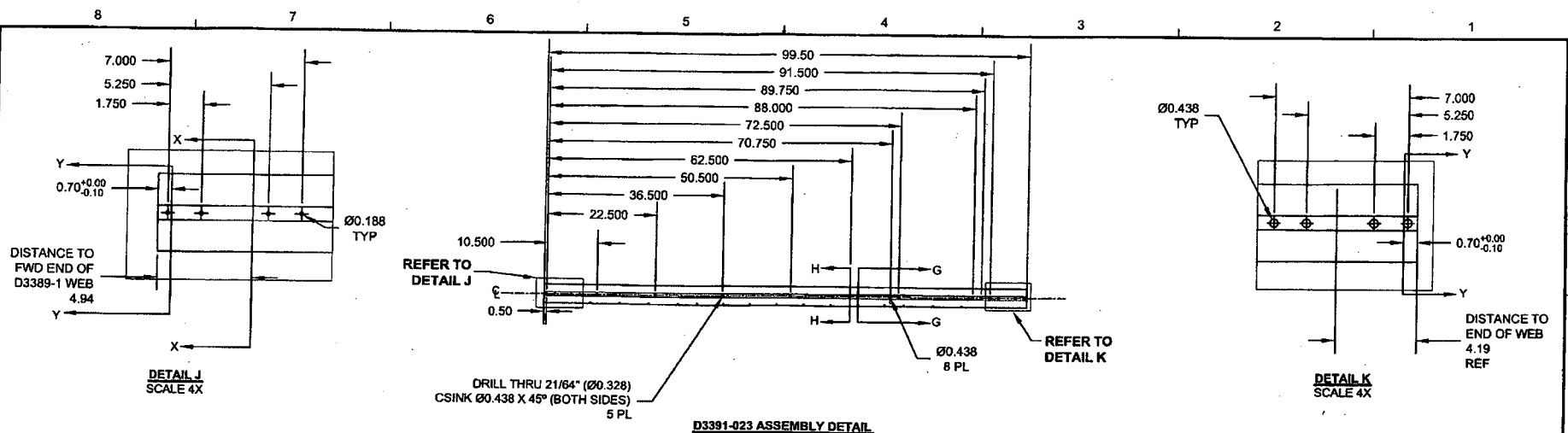
48

st510

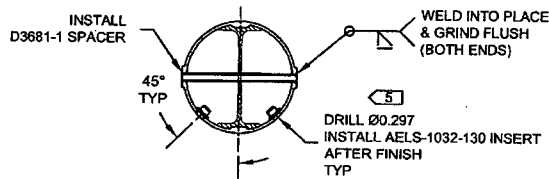
57

M126109

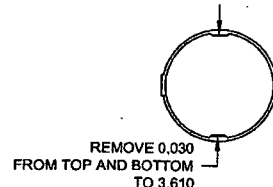
57



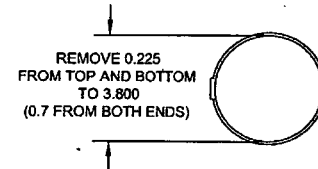
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

RELEASED
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

115503 MJS
14-0402

